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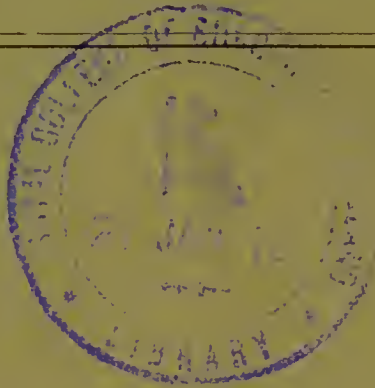
By THEO. W. FISHER, M. D.,

Superintendent of the Boston Lunatic Hospital, Boston, Mass.

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## TWO UNIQUE CASES OF INSANITY: POSSIBLY EPILEPTIC.\*

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BY THEO. W. FISHER, M. D.,

Superintendent of the Boston Lunatic Hospital, Boston, Mass.

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The first of these two cases, which differ very widely except in the possibility of an epileptic origin, was a young man of twenty-three, at the time of his admission to the Boston Lunatic Hospital, October 21st, 1885. He was single and a student of law nearly ready to graduate. His family history was good, better than that of most people who have never suffered from nervous or mental diseases. His father and a paternal uncle have a rheumatic tendency, and the paternal uncle has epilepsy. One paternal cousin has the opium habit, and is mildly incapable. With these exceptions there is no morbid heredity whatever.

The patient has been in excellent health until within a year. He is tall, muscular and active, of dark complexion and intelligent, expressive features. In college, he was noted for his athletic feats in the gymnasium. He took prizes in his sophomore year, in all the college contests far and near, for jumping. He was always inclined to carry whatever he undertook to extremes. He ranked high in study the first year, and in athletics the second year. He dropped athletics the third year, and seemed to care little for his reputation as a gymnast. He did not study excessively, and never late at night. He was very fond of whist, and joined a whist club, but did not drink or smoke. He was naturally cheerful, but sometimes reserved with much suppressed

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\* Read before the Boston Society for Medical Observation, and the Boston Medico-Psychological Society.

feeling; was naturally conscientious, and became a member of an orthodox church, three years before admission. He was never extravagant in his feelings or excessively emotional.

During his sophomore year, while greatly interested in athletics, he became acquainted with a gentleman whose enthusiasm in the same direction takes a somewhat morbid and unhealthy form, it is said. This person, whom I shall call Mr. M., became greatly attached to our patient, whom I shall call Mr. A. He expressed great admiration for his manly form, and photographed him, as he had others, in a state of nudity. Mr. M's. hobby was a search for the "perfect man" in the physical sense, and he was accustomed to measure and photograph athletes for purposes of comparison. He told his new friend Mr. A. that he could never become a perfect man unless he was circumcised, and he kindly performed this surgical office for him, in a friendly effort to improve his health and physique.

Mr. M. later was kind enough to allow Mr. A. to invest a small sum of money in a speculative enterprise which turned out badly, so that the money was lost. He became more and more under Mr. M's influence, although mistrusting his motives at times, until six months before his admission, when Mr. M. fell sick, and Mr. A. attended at his office for him, and also helped to nurse him. He felt in some mysterious way bound to him, although he afterwards alleged that he believed his motives were not honorable. About this time he met with discouragement in an affair of the heart, which together with his loss of money and his foolish connection with Mr. M., which he knew not exactly how to break off, troubled him exceedingly.

He began to lose sleep at this time, and became restless, walking the floor much by night and by day. His

appetite failed, and he became somewhat depressed and nervous. He had no headache, dyspepsia, constipation, or other physical symptoms at this time. One day, in the spring, while walking, he had a "set" look and suddenly exclaimed, "Oh God! this is terrible." He seized a fence and shook it, shouting "Let me go! Let me go!" He did not explain his feelings, nor the meaning of his expressions at this time. He was treated with bromides at night by Dr. C. Ellery Stedman, and sent off on a yachting expedition during the summer. He returned in improved health, but by no means well. He slept well and retired at nine o'clock, at this time resuming his studies, but was troubled with "specks" before his eyes, for which he consulted Dr. J. P. Oliver. He had also consulted Dr. Shaw for a purulent discharge from his right ear.

Monday night before admission, he took a bag and went out, saying in answer to the apparent anxiety of his family, that he was "not going to do anything wrong." He soon came back. Tuesday evening he visited his pastor, and asked him about the possibility of Christians becoming insane. A short time previous he had told his Sunday School teacher that it was impossible for a perfect Christian to become insane. On this evening he seemed excited. At three o'clock Wednesday morning, his father heard groans coming from his room, the door being locked. On bursting open the door, he was found on the bed apparently in a state of opisthotonos, back arched, and head and feet resting on the bed. His right little finger was in his mouth, and he was exclaiming, "Oh! how I suffer! Oh! how I suffer!" His face and hand were covered with blood from his finger which he had bitten to the bone. His father pulled the finger from his mouth thereby detaching a large seal ring, which the patient involun-



tarily swallowed. His father seized a bottle of ether which was near at hand, and tried to etherize him in order to relieve his apparent distress. Dr. Stedman was at once sent for, and injected a half grain of morphia subcutaneously.

He soon became rational and continued so through Wednesday. He spoke of his attack and said he had swallowed the ring, but did not say whether it was done purposely or not. At night he became excited again. At 8 P. M. had pain in the small of his back and mustard was applied. He vomited blood which had been swallowed the night previous, and then went into a condition apparently of *emprosthotonos*, arching his body from the bed in the contrary direction to the former attack. There was great muscular tension but no spasm on either of these occasions of excitement. He was etherized by Dr. Stedman and kept insensible from eight to eleven o'clock, his struggles and violence being extreme and uncontrollable by any ordinary means. Emergency certificates were made out and he was brought to the hospital by his father and Dr. J. S. Flint. He was so violent on coming out of the ether, that the restraint of a camisole was required for a few hours, until he came wholly to himself. A prolonged hot bath was then given and he fell asleep, waking in a calm and rational condition.

Thursday evening he was again in a state of partial *opisthotonos* for an hour or two. He was conscious, asking for ice or for his pillow to be moved, in a weak hysterical way. Had one forty-eighth of a grain of hydro-bromate of hyoscine at nine o'clock, and it was repeated at midnight.

Friday morning he was calmer and more rational although he had slept little and suffered from nausea.

Had cracked ice, fruit, Hunyadi-Janos water, and a siphon of plain soda water. The evening record states that he had been very notional, but suffered no pain in head or back. Had been standing on his head in a corner in hopes to better eject the ring by vomiting.

On Saturday he remained in a weak but rational condition.

Sunday the record states that he slept five hours the night previous and was inclined to be more communicative. He said he had been in great anxiety of mind on account of his relations to Mr. M. During the summer he had said to some one, "Mr. M. is a devil." He thought on account of the circumcision he would be a slave to Mr. M. all his life. He quoted from an epistle to Timothy a text which he thought proved that the circumcised would always be under bonds. Said he lost much sleep in the spring and summer and the night of the attack. When in great distress of mind the idea came to him that by biting off his finger he would lose his dependence on Mr. M. He says Mr. M. had told him he would never be a perfect man as long as he wore a ring. He began to bite and it hurt him so he arched his back in the intensity of his suffering. When the ring went down his throat he was in a spasm of agony for want of breath, and struggled violently against those who held him. Says he saw light or fire all round him.

In the evening he says his efforts at vomiting were so urgent that he got on his hands and knees in the effort to expel the ring. He is now, Sunday evening, calm and rational, pulse 60. Finger which was bitten to the bone has been dressed with iodoform.

The patient continued rational and in good health until November 14. He slept and ate well. Was interested in books, whist and billiards, although he was sometimes excitable and rather too voluble over his

games, as if he had taken a glass of wine. He gave an account one day of three attacks of vertigo which he had had at intervals of a year, the first one in college and the last one a year ago. He says he lost consciousness for a few moments, falling on a sofa in his room on one occasion. The effects were transient though Dr. Morrill Wyman was called after the first one. Some one, he could not remember who, had suggested that they might be due to *petit mal*. No other symptoms of epilepsy could be elicited on inquiry. His finger required poulticing and there was exfoliation of bone before it healed.

November 14—Acted strangely when finger was dressed, as if under suppressed excitement. Insisted on a certain patient's being present. In the evening was very insane. Had been tumbling about on the floor, hanging on to attendants and others. Made silly and irrelevant speeches and refused to answer questions. Face intensely flushed and pulse 156. Had torn the bandage off his finger. He was ordered a prolonged hot bath, and chloral hyd. 3 ss., potass. brom. 3 ss., hyos. hydro-brom., grains one-forty-eighth. While in the bath went into a state of opisthotonos on immersing his hand.

November 15—Is said to have slept all night. Is now lying on his back, his right hand under his body and his left hand over the right shoulder holding on to the bedstead. His muscles are all rigid, his eyes closed, his face flushed, his teeth set. Potass. brom. and fl. ext. ergot 3 ss. aa.; was ordered at 9 A. M. and 3 P. M. with a laxative. In the evening it was reported that he remained in bed, acted strangely but said nothing. Had been more or less rigid all day.

November 16—Had a quiet but wakeful night. Is less rigid. Ate a good breakfast. Smiles. Pulse 90 to



100. Evening—Was rational six hours this P. M. Did not talk quite distinctly and had a general but slight trembling. Tried to explain his previous condition, but does not remember much of what happened in the last forty-eight hours. At eight o'clock in the evening became somewhat rigid again and refused medicine except from the interne, who was an old friend of his.

November 17.—In the morning refused to answer questions. Stares in a fixed way but holds out his hand to be dressed. Keeps it there a few minutes after it is dressed and then lets it drop. In the evening became communicative and manageable. Says he was suspicious of harm when he refused the medicine. Is afraid of other patients.

November 18.—Is quiet and rational. Tries to describe some of his fancies and delusions. Thinks the idea of his going home soon unsettled his mind and brought on a relapse. Intends to remain until thoroughly well.

In a few days he recovered his usual health and seemed even calmer and more natural than before. There was nothing more noteworthy in his case until his discharge apparently perfectly well February 20th, 1886. He has remained well to date, November, 1886. The only treatment during the convalescent period was the use of bromide of potassium and ergot.

In this case positive evidence for the existence of genuine idiopathic epilepsy is wanting. If we assume that it was present we may consider the three attacks at intervals of a year, which preceded his insanity, as attacks of *petit mal*. The attack just preceding his admission to the hospital and the one which occurred a month later, were more like hystero-epilepsy, being largely emotional and without true epileptic convulsions. The patient claimed that he was conscious throughout the

first one; that the apparent opisthotonos was the result of his agony in the endeavor to bite his finger off; and the emprosthotonos in the evening was the position assumed by him in his efforts to vomit the ring. His recollection of the attack must be taken with some allowance considering the extreme mental excitement. His last statement was partly confirmed by the fact that at the hospital he stood on his head in a corner for the purpose of better ejecting the ring.

His consciousness was certainly in abeyance during the second attack in November, at times, as he failed to remember certain events, though he did remember other circumstances in the course of the attack. He claimed to have been conscious the whole time. When, put in the bath, for instance, he remembered a remark made the night before about his posing as a Greek statue, but forgot who undressed him. He seemed to assume the opisthotonic attitude voluntarily in the bath, and when remonstrated with said he would not do it again.

His mental condition had been that of depression, emotional excitability, and at times delusion of a transient character. Some of his ideas concerning his relations to Mr. M. were of a delusional nature. In the second attack he seemed to have delusions about certain patients, and to be apprehensive of harm from them. His mental state had some of the characteristics of hebephrenia, for in spite of his size and muscularity he was still a very young man.

Dr. A. McLane Hamilton, in *Brain*, January 1886, reports a case of hystero-catalepsy in a male cured by testicular pressure. He says it is the only case of the kind in a male he can find reported. I have not attempted to find recorded cases as similar ones are not extremely uncommon in my experience, the motor symptoms ranging from slight and transient rigidity to the most perfect and prolonged attacks of catalepsy.

I have tried to believe that the three attacks of supposed *petit mal* were accidental attacks of vertigo, due to excessive stimulation of the motor centres or excitability of the heart or some transient cause of nervous exhaustion. The later condition might then be considered an attack of emotional insanity beginning in the spring of 1885 and growing out of his relations with Mr. M. In a person of highly developed motor centres at his age, attacks of mental excitement would very likely be characterized by anomalous motor symptoms. Rolling on the floor, posturing, rigidity, and even catalepsy are not uncommon in insane youth of the male sex. In the present case unusual muscular excitement seemed to occur in consequence of an over training or disproportionate development of the cerebral motor centres.

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The second case was that of a lady forty-one years of age, at the time of her admission to the Boston Lunatic Hospital as a voluntary patient, February 28th, 1886. She is a person of great force of character, of superior intelligence, of even brilliant intellect, with a very clear, and at times, dramatic power of expression. Not fanciful and emotional, but sensible, and usually cheerful, adapting herself to widely varying surroundings, self-reliant when in health, and a pleasant companion under all circumstances.

Her family has been noted for similar traits, and the hereditary history of the case is unusually interesting. Her father was a well-known clergyman, the centre of a circle of free-thinkers, philanthropists, wits and philosophers, some of world-wide fame. At the age of sixty-three, he had his first attack indicating organic changes in the brain. He fell suddenly, and was unconscious for a short time. No convulsions, paralysis

or aphasia were observed, but there was an increasing loss of memory and great irritability, with a repetition of his attacks, until he died at the age of seventy-one. He would ask people in the street who bowed to him to tell him his own name, and what street he was on, so complete was his loss of memory.

One paternal uncle died at the age of fifty of apoplexy. He fell suddenly and died in a week. He repeated continually one sentence only till he died, viz.: "Oh! if I could see S—— before I am an idiot."

Another paternal uncle was somewhat intemperate. He also fell at the age of forty-eight in the street. He lived six months however, and died in a hospital for the insane. His only remark until he died, which he made in answer to all questions was—"I have a million dollars."

Her father had two brothers, and no sisters. Her paternal grandfather died in middle life of some cause unknown to the patient. Her paternal grandmother died of paralysis and aphasia in her old age.

Her mother died of heart disease at the age of thirty-seven. One maternal aunt of heart disease, and the other from some cause unknown. Her maternal grandfather died of gout. Her maternal grandmother of some unknown disease. One maternal cousin was insane, it was said through paternal heredity. There was no other insane or nervous heredity on the mother's side.

The paternal uncle who died in an asylum, had seven children, all of whom have had repeated attacks of transient paralysis, affecting first one and then another set of muscles. They have been seized at periods of life, varying from seven years to forty-eight years. They have all been able to maintain good positions in life, to marry and conduct business successfully. All



but one have been married and had children, none of whom have had paralysis or epilepsy; none have been insane. The other uncle had six children, none of whom had paralysis.

Patient's mother had ten children, three of whom died in infancy. One brother at the age of thirty, was seized with paralysis at the table, and died in a week, repeating frequently his only sentence—"I wish I could see father." One brother was drowned. Of the five living children, one brother had two strokes of paralysis, one at thirty-eight, and one at forty-four. He had aphasia and right hemiplegia, but recovered. Another brother was said to have had sunstroke in the army, at the age of twenty. He came home and was insane for a year, without paralysis except of the sphincters. He was very irritable, and bad-tempered, with a propensity for making extravagant purchases at auctions, and running up large bills. He recovered perfectly, and is now in a responsible position, requiring constant mental application. One sister had a stroke at the age of forty-four, and her face was drawn to one side. One brother has heart disease.

The patient had the equivalent of a college education, and was engaged in teaching before marriage. She was naturally cheerful with a quick temper, but under good control. Was somewhat sickly as a child, with a neurotic constitution. First menstruated at fifteen, and was troubled with dysmenorrhoea for many years, in fact until her second child was born. Menstruation in former years was scanty; of late years profuse. For the last four years menses have occurred at too frequent intervals; also has been subject to sick headaches, but has not been hysterical.

She was married at twenty-three, and subsequently lived fifteen years at a mining district in the West,



where her husband's business of mining engineer called him. She has had two miscarriages, two infants, who died in infancy, and now has seven living children. One boy, six years old, has been somewhat undeveloped, mentally having spells of frenzy in which he dashes himself against the furniture or walls. He once purposely cut himself badly with a pair of scissors in one of his attacks. He has never had convulsions.

The patient has had a series of attacks of unconsciousness, the first of which occurred at the age of twenty-two, the year before her marriage, while teaching. She had been over-studying, and was somewhat anxious about a certain matter. Was alone in her room reading, when she fell to the floor. On coming to herself, she saw by the clock that nearly half an hour had elapsed. She found that she had bitten her lip during the attack, or that her teeth were forced through it by the fall. She arose, and went to her class feeling very much confused and weak; couldn't retain food for several days.

Four months later she had her second attack. She woke up suddenly in the night, sat up, and then fell out of bed, bruising her head. Was unconscious for some time, and next day felt confused and depressed.

The third attack occurred five years after her marriage. She was travelling with a child four years old, being eight months pregnant. She arrived at Chicago the night of the great fire in 1871, and was unable to procure a hack for any sum of money, and was obliged to walk three miles with her child through the burning city, to reach another station. Two days after reaching home, she fell, and remained unconscious a short time. No convulsions were reported to her by her friends at this time if observed. She slept heavily for twenty-four hours after this attack.

The fourth attack occurred thirteen years later under equally exciting conditions. In 1881, one of her children was kidnapped under the most painful circumstances, by parties who hoped to force its parents to offer a large reward for its restoration. She had been obliged to conduct the search for him personally much of the time for two years, and had travelled with detectives far and near, occasionally getting some real trace of her boy, but often doomed to disappointment by false resemblances and the tricks of the guilty parties to throw her off the track. She had again left Chicago on her way home, and was changing cars at a small station, when she fell on the platform. She was taken into the station and an hour later, feeling better, tried to take the cars, when she fell again and was carried to a hotel, and a doctor called. It was three days before she became fully conscious. She then could not remember her own name or where she lived. Some one mentioned Chicago, and she remembered that she had been there, and gave directions to telegraph the clerk of the Palmer house, for the name of the lady who occupied room No.— on such a night. When her name was repeated to her, she remembered where she lived and all about herself.

The fifth attack occurred in Boston, two and a half years ago. Came to town in the horse-cars; felt queerly; got out, and fell in the street. She again forgot her name and where she lived, but watching the cars as they passed, she recognized the color of her car, and the conductor recognized her. This was her last attack. She says she never had convulsions to her knowledge. She never screams, or has any distinct warning. She has however sometimes had a flash of light, and a pungent sensation in her nose. These points were elicited only by inquiry. They may have been of the nature of an

aura of the special senses. She has in the last four years found blood on her pillow occasionally, and her tongue shows marks of having been bitten. She has had also in the last four years frequent attacks of vertigo, with buzzing in the head, confusion of ideas, nausea, and transient unconsciousness. A year and a half ago, had these attacks more frequently than ever, with inability to retain food.

For two months, she was much reduced in strength, and in November, 1884, on my recommendation, came east, to enter the Adams Nervine Asylum. She remained under the care of Dr. Page until the following April. Her treatment as described by herself consisted in the use of bromides, ergot, massage, electricity, spinal cupping and thermo-cautery. Seven years previously, she had consulted Dr. Hammond of New York, for pain in the cervical and coccygeal regions, the cautery being used. She thinks there has been dislocation or fracture of the coccyx, due to some fall possibly.

She was very much improved at the Nervine Asylum, and returned home, when the vertigo and vomiting returned in great severity. Often fell from vertigo three or four times daily, remaining unconscious for a very few minutes at a time. In August, 1885, again came east, and under Dr. Page's direction went to the mountains. Under this change, and Dr. Page's treatment, she was much improved again. Returned to Boston in September, and remained under his treatment until she came to the Boston Lunatic Hospital by his advice.

A very important and interesting feature of the case remains to be described. In the fall of 1883 she first had hallucinations of vision. She seemed to see people at her right side, who quickly disappeared as she turned to look at them. She could see the trail of their gar-

ments as they disappeared. She did not see any visions on the left side. For months she could only get glimpses of them. In the spring of 1884 they remained in full view. The first of her unreal visitors to become visible, was a gentleman about thirty-five years old, of pleasant features, brown hair and moustache, well-dressed in grey or dark clothes. He usually had a pistol which he handled, and then put to his temple, nodding his head as if urging her to shoot herself. Sometimes he had a knife.

Another frequent visitor was a large, pleasant looking lady, who dressed elegantly in different costumes. She could easily draw her portrait if she was an artist. There were other figures, male and female, all behaving with propriety, moving about or sitting in a natural way. If she saw any children they were always boys. In the early part of her hallucinatory period she saw a stout lady sitting with a large poke bonnet in her lap. Her own little boy went and sat apparently in the lady's lap. On rising the visionary bonnet adhered to the real boy, and he carried it about with him.

These visions have been present almost daily from the beginning. She sees them dimly in the night, and they do not disappear at once on closing the eyes. She sees them most plainly with the right eye alone, more indistinctly with the left. They do not fade out gradually but disappear suddenly, or go out of the door naturally. She is not terrified but only annoyed by them. In a horse-car, for instance, she hesitates to take a vacant seat pointed out to her, because there seems to be some one in it. She sits down carefully and comes down harder than she expected. She is rather mortified to have to undress in the presence of a male visitant. She is not a believer in spirits.

Hallucinations of hearing began in the summer of



1885. She first heard faint whispers as if the visions spoke to her. She now remembers that she always hears the voices on the left side as if from behind, while she sees the visions on the right side. I found she could hear a watch on the left side at one foot distant, on the right at four feet. She soon after felt a touch on her shoulder as if to attract her attention to the whispering. Then the whispers became more audible, though still faint, and the visions seemed to be talking together. Later she understood most that was said. One of the first things said was: "I wouldn't eat that;" "if you do Willie (the lost boy) wont have anything to eat," or "You'd better kill yourself, you will never see Willie till you do," or "You're a nice mother if you wont give your life for your boy's," &c.

Last fall she spent seven weeks with a lady friend who was much depressed and wanted to die. The voices began to tell her to kill Mrs. B. The gentleman and lady told her they were messengers from God. Patient had always believed in some form of metempsychosis, and the voices said that God wanted Mrs. B's soul to use over in another body. Was strongly tempted to poison her or kill her, and once bought morphine for the purpose. Her last attack of vertigo occurred last fall at this lady's house. When not under special control of the hallucinations she can reason clearly and describe perfectly her unhappy state of mind.

The depression \*with which this patient suffered was not like a genuine melancholia, but rather discouragement at her state of health, and a yielding to belief in the visions, which counselled homicide and suicide. At times from the first she has been quite cheerful, sociable and active in work or amusement, making the best of her surroundings, and becoming a favorite with all



through her good nature and versatility of talent. She has been allowed much liberty from the first, going to the city once and often twice a week, attending theatres and concerts, always properly accompanied.

Her treatment has been simple. At first she took one of Brown-Sequard's neuralgia pills morning and night for headache, with tinct. gentian. comp. as a tonic, and chloral hyd. grs. xv. at night if needed. She took one grain of ergotine daily, increased to three grains at the menstrual period to control menorrhagia. There was anorèxia and sometimes vomiting. She took the third week tinct. cinch. comp. and koumiss and gruel made of imperial granum.

February 26 the voices told her to save her chloral until a poisonous dose had accumulated. She was then given potass. brom. grs. xv. and chloral grs. xv. at bedtime regularly, and Brown-Sequard's mixture of the bromides at 9 A. M. and 3 P. M. The neuralgic pill was omitted, and elixir of iron, quinine and strychnine given as a tonic. The nature of hallucinations in general was explained to her with illustrations drawn from the experience of infants, of men who have lost a leg and of the insane around her. The fact was pointed out to her, that her visions were at first seen with the right eye chiefly, or at least on the right side, and that the voices were heard with left ear only. Partial deafness was demonstrated in this ear. She was made to believe for the time at least in the unreality of her hallucinations and the possibility of her recovery. She is very myopic, vision one-quarter, nothing revealed by ophthalmoscope.

Since this conversation she has been more cheerful and more free from the visions. When they are present she can more readily convince herself of their unreality. Egg nog and cod liver oil emulsion have been added

to her diet list, and she is gaining slowly in strength and the power of digestion.

Since the above was written the patient has had two periods of mild delirium lasting a few hours, in which her conversation is in French, and during which time she says the visions speak to her in French; seems hysterical at times, after bad news especially. Believes less in visions but sees them on the right and hears them on the left. They have advised suicide several times telling her how to do it.

There have been at times some ataxia of speech and some aphasia and agraphia, slight and transient. Wrote *alpy* for "play" and couldn't get it right until she had looked in the dictionary. Puts out tongue bunglingly. In one attack grated her teeth and the muscles of eyeballs were tender as if from spasm. Also has a tender spine with an anæsthetic spot in dorsal region. Showed a tendency to fall backwards after one attack.

The evidence for epilepsy as a cause in this case is much stronger than in the first. Five attacks only of what may be considered *grand mal* are reported by the patient in twenty-one years, viz.: two, four months apart before marriage, one five years after at the time of the Chicago fire, and two in 1883, one at the west and one in Boston. No convulsions have been reported to the patient in either of these attacks. The last two in 1883 were the most serious, and were followed by some transient aphasia. With such a family history, fifteen out of twenty-two persons, in the two generations including her father and herself having had paralysis, one would have expected paralysis in her case. None however exists, and none has been reported except the aphasia which may have been simply a post-epileptic condition.

The attacks of vertigo are more characteristic. She

describes them as sometimes preceded by flashes of light and pungent odors which are probably auræ of the senses, implying that these sense centres are implicated in the nervous explosion. She has found her tongue bitten and blood on her pillow indicating an attack of nocturnal epilepsy. With the vertigo there is buzzing in the head, confusion of ideas, transient unconsciousness and nausea. This description is quite characteristic of *petit mal*, and these attacks have at times been very frequent. The last she recollects occurred five months ago, though she recently fainted, as she thinks from the pain of indigestion, and has since fallen in her room bruising her forehead.

The existence of hallucinations, is in a measure, corroborative of epilepsy. Echeverria states that hallucinations exist in eighty-six per cent of cases of epilepsy. The unilateral character of the hallucinations is also interesting being comparatively rare. A few of the most recent writers on insanity casually mention the fact that such cases occur, and Hammond in his last edition reports a case or two. Dr. Hammond read a paper before the New York Neurological Society recently on unilateral hallucinations presenting four cases including the two in his book. He says Calmeil first noticed this affection. Baillarger reported two cases. The subject was discussed at the Medical Congress at Rouen. It has occurred occasionally in my experience.

The following case which I very briefly summarize is interesting in this connection. A man of insane heredity was treated and died at the Boston Lunatic Hospital. He suffered from suicidal melancholia, with hallucinations of sight, and left-sided auditory hallucinations. He had been deaf in the left ear for twenty years. He had hyperæsthesia, giving rise to a delusion of having cow-

itch or of crumbs in the bed. He also had anomalous motor symptoms consisting of attacks of convulsions, sometimes general, sometimes partial. He had at times opisthotonos, followed by violent struggling, kicking, biting, barking, growling, choking, gagging, sighing, and rolling up of the eyes, in different attacks. There was also tenderness of the spine, pain in the neck and head, vertigo, inequality of pupils, the left being smaller, and towards the end he had a sensation of being twisted from right to left, as if in a swing. His body rotated violently from right to left at times, whether in bed or in walking. Ménière's disease was suspected, but a careful microscopic examination of the internal ear gave no evidence of any lesion. There was, however, hyperostosis of the skull, œdema of the pia, and atrophy of the convolutions, showing conclusively the cortical nature of the disease.

The following notice of Prof. Bechterew's paper is pertinent to the preceding case:

*Compulsory Movements Following Destruction of Cortex.* By Prof. W. Bechterew, of St. Petersburg. *Virchow's Arch.*, vol. c., p. 473, 1885:

"Prof. Bechterew is quite right in declaring that although Goltz, Trepier, and others, observed circus-movements and other forced movements following upon experimental destruction of certain cortical areas, but little attention had been paid to the subject hitherto. By physiological experiments Prof. Bechterew claims to have proven that circus-movements follow upon the destruction of an area corresponding to the parietal convolutions of man, and that such forced movements are similar to those which are produced by destruction of the organs of equilibrium. The author believes furthermore that these compulsory movements are irritation-symptoms, and may therefore be produced by destruction of the neighboring motor areas. Bechterew thinks (and he bases this opinion upon Flechsig's investigations) that there is good anatomical reason for assigning circus-movements to this area just



caudad of the motor convolutions, for the superior peduncles joining the cerebellum and the cerebrum are seen to terminate in this parietal region of the cortex, and we know that destruction of the fibers of the superior cerebellar peduncles is followed by similar forced movements. The author cites in conclusion a number of pathological cases in which forced movements have been a prominent symptom, and refers in detail to a case which he himself had occasion to observe. The patient, a man of fifty-four, had received some years ago a blow upon the head; there was a distinct scar on the left side of the skull on the border between the parietal and occipital bones. The patient exhibited symptoms of dementia when he came under observation. He was seized suddenly with circus-movements; he would always turn from right to left on being lifted out of bed and whenever he attempted any movement. In the sitting position the trunk and head would be turned several times in the direction which the circus-movements always took; in the recumbent position these movements would not occur. He died of pleurisy a few months after these symptoms set in. The autopsy revealed local encephalitis of the parietal region, and an otherwise normal cortex, with the exception of a slight atrophy of the frontal convolution. This area of disease corresponded closely enough to the region which for physiological and anatomical reasons had been held responsible for these forced movements."

It is probable the cases reported were also due to irritation or nervous explosion in the cortex, affecting different centres at different times, and in varying degrees and modes of succession. If so, they would both come under the Jacksonian definition of epilepsy.



